

DETAILED ACTION

Response to Amendment

1. Receipt of the Applicant's Amendment filed on 08/07/2009 is acknowledged. The amendment includes the amending of claims 1, 12, and 15, the addition of claims 34-35, and the cancellation of claims 10-11, 24-25, 30-31, and 33.

Information Disclosure Statement

2. The information disclosure statements (IDS) submitted on 08/07/2009 has been received, entered into the record, and considered. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Examiner's Amendment

3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone message from applicant's representative Mr. Ronald (Reg. No 64,170) on September 21, 2009.

4. The application has been amended as follows:

Delete Claim 34.

Delete Claim 35.

Allowable Subject Matter

5. Claims 1, 4-9, 12-13, 15, 18-23, and 26 are allowed and now renumbered as 1-17.

Reasons for Allowance

6. The following is an examiner's statement for reasons for allowance:

Prior art fails to teach a combination of elements writing first and second data to first and second data volumes, respectively, whereon the first data volume is a first primary volume, the second data volume is a second primary volume, and the first and second data volumes are unrelated data volumes; refreshing the second data volume to the data contents of the first data volume that existed at time T, wherein refreshing the

second data volume further comprises overwriting data of the second data volume with data of the first data volume that existed at time T, generating first and second maps in memory, wherein each of the first and second maps comprises a plurality of entries, wherein each entry of the first map corresponds to a respective memory block that stores data of the first data volume, and each entry of the second map corresponds to a respective memory block that stores data of the second data volume, setting a first bit in each entry of the first map, wherein each first bit of the first map is set to indicate its respective memory block stores valid data, and clearing a first bit in each entry of the second map, wherein each first bit of the second map is set to indicate its respective memory block stores invalid data; modifying data of the first data volume while the second data volume is being refreshed to the data contents of the first data volume that existed at time T; and

Modifying data of the second data volume while the second data volume is being refreshed to the data contents of the first data volume that existed at Time T, as recited in independent claims 1 and 15.

Specifically, the prior art teaches modifying a first data volume while a second data volume is being refreshed to the contents of the first data volume, but does not suggest modifying data of a second data volume while that second data volume is being refreshed to the contents of a first data volume.

These features, together with the other limitations of the independent claims are novel and non-obvious over the prior art of record. The dependent claims 4-9, 12-13, 18-23, and 26 as being definite, enabled by the specification, and further limiting to the independent claim, are also allowable.

Contact Information

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mahesh Dwivedi whose telephone number is (571) 272-2731. The examiner can normally be reached on Monday to Friday 8:20 am – 4:40 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Vo can be reached (571) 272-3642. The fax number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mahesh Dwivedi
Patent Examiner
Art Unit 2168

September 22, 2009
/Mahesh H Dwivedi/
Examiner, Art Unit 2168

/Tim T. Vo/
Supervisory Patent Examiner, Art Unit 2168